

**INFLUENCE OF MID-OCEAN RIDGE PROCESSES ON THE OCEAN**

Bibliography for the Second Scientific Meeting

The Oceanography Society



**U.S. DEPARTMENT OF COMMERCE**

National Oceanic and Atmospheric Administration

National Environmental Satellite, Data, and Information Service

National Oceanographic Data Center

Library and Information Services Division

March 1991

## INTRODUCTION

During the past 10-15 years, the ocean research community has made numerous discoveries along the mid-ocean ridge system throughout the world's oceans. New hydrothermal circulation systems, new communities of benthic organisms, and new insights into the tectonics and development of the earth's crust have opened a vast and exciting new area of scientific inquiry.

The National Oceanographic Data Center (NODC) is pleased to present the attendees of the Second Scientific Meeting of The Oceanography Society with this special publication, Influence of Mid-Ocean Ridge Processes on the Ocean. This publication provides a list of recent reference works concerning the influences of Mid-Ocean Ridge processes on the ocean, which were found by searching several online files and several CD-ROM products available at the National Oceanic and Atmospheric Administration (NOAA) Library.

The NODC is one of three discipline-oriented data centers operated with the National Environmental Satellite, Data, and Information Service (NESDIS) of the NOAA, U.S. Department of Commerce. The other two NESDIS environmental data centers are the National Climatic Data Center (NCDC), and the National Geophysical Data Center (NGDC). These organizations serve as national repositories and dissemination facilities for global oceanographic, climatological, and geophysical data.

Data held by each center are acquired from a variety of sources including government agencies, universities and research institutions, private industry, and foreign organizations. Foreign data are obtained through bilateral exchanges and through the World Data Center (WDC) system. The WDC system comprises WDC-A in the United States, WDC-B in the U.S.S.R., WDC-C in Western Europe and Japan, and WDC-D in the Peoples Republic of China. This multiple-center network is maintained to facilitate international data exchange, to protect data collections from catastrophic loss, and to make data accessible to users around the world. Most WDC-A subcenters are located at and operated by the corresponding NESDIS national data centers. WDC-A for Oceanography, for example, is operated by the NESDIS National Oceanographic Data Center.

Many of the reference works described in this publication are available from the NOAA Central Library and Information Services. Addresses and telephone numbers of contact points are:

NOAA Library and Information  
Services Division, E/OC4  
6009 Executive Boulevard  
Rockville, MD 20852  
301 443 8330

NODC User Services Branch  
E/OC21  
1825 Connecticut Avenue, N.W.  
Washington, DC 20235  
202 673 5549

# Influence of Mid-Ocean Ridge Processes on the Ocean

Alt, J. C., T. F. Anderson, L. Bonnell, K. Muehlenbachs, K. Becker, H. Sakai, and al et. Dept Earth & Planetary Sciences, Campus Box 1169, Washington Univ, St. Louis, MO 63130 USA. "Mineralogy, chemistry, and stable isotopic compositions of hydrothermally altered sheeted dikes: ODP Hole 504B, Leg 111 in: Proc., scientific results, ODP, Leg 111, Costa Rica Rift." (1989)

Arehart, G. B. Dept of Geological Sci., Univ. of Michigan, Ann Arbor, MI. "Volcanogenic massive sulfides: comparison of ancient and modern marine ore-depositing systems." Marine Mining 8(3) (1989)

Autio, L. K., J. W. Sparks, J. M. Rhodes, K. Becker, H. Sakai, and al et. Dept Geology & Geog, Univ of Massachusetts, Amherst, MA. "Geochemistry of Leg 111 basalts: intrusive feeders for highly depleted pillows and flows in: Proc., scientific results, ODP, Leg 111, Costa Rica Rift." (1989)

Barrett, T. J., P. N. Taylor, and J. Lugowski. Dept. of Geological Sciences, McGill Univ., Montreal, Quebec, Canada. "Metalliferous sediments from DSDP Leg 92: the East Pacific Rise transect." Geochimica et Cosmochimica Acta, 51(9), (1987)

Bazylinski, D. A., J. W. Farrington, H.W. Jannasch. Woods Hole Oceanographic Institution, MA. "Hydrocarbons in Surface Sediments from a Guaymas Basin Hydrothermal Vent Site. Technical rept." Organic Geochemistry, v12 n6 p547-558 (1988)

Bercovici, D., G. Schubert, and G. A. Glatzmaier. Dept Earth & Space Sciences, Univ of California, Los Angeles, CA. "Three-dimensional spherical models of convection in the Earth's mantle." Science 244(4907) (1989)

Berndt, Michael E., William E., Jr. Seyfried, and David R. Janecky. "Plagioclase and epidote buffering of cation ratios in Mid-ocean ridge hydrothermal fluids; experimental results in and near the supercritical region." Geochimica et Cosmochimica Acta, 2283-2300. 53. (1989)

Bowers, T. S. Dept. of Earth, Atmospheric & Planetary Sciences, Massachusetts Institute of Technology, Cambridge, USA. "Stable isotope signatures of water-rock interaction in mid-ocean ridge hydrothermal systems: sulfur, oxygen, and hydrogen." Journal of Geophysical Research 94(B5) (1989)

Brand, Uwe. "Biogeochemistry of late Paleozoic North American brachiopods and secular variation of seawater composition." Biogeochemistry, 159-193. 7. (1989)

## Influence of Mid-Ocean Ridge Processes on the Ocean

Brikowski, T., and D. Norton. Desert Research Inst. 2505 Chandler Ave., Suite 1, Las Vegas, NV. "Influence of magma chamber geometry on hydrothermal activity at mid-ocean ridges." Earth & Planetary Science Letters 93(2) (1989)

Brikowski, Tom Harry. "A quantitative analysis of hydrothermal circulation around mid-ocean ridge magma chambers." (1987)

Campbell, A. C., T. S. Bowers, C. I. Measures, K. K. Falkner, M. Khadem, and J. M. Edmond. Dept. of Earth, Atmospheric & Planetary Sciences, Massachusetts Institute of Technology, Cambridge, USA. "A time series of vent fluid compositions from 21 degrees N, East Pacific Rise (1979, 1981, 1985), and the Guaymas Basin, Gulf of California (1982, 1985)." Journal of Geophysical Research 93(B5) (1988)

Campbell, A. C., and J. M. Edmond. Dept. of Earth, Atmospheric & Planetary Sciences, Massachusetts Institute of Technology, Cambridge, USA. "Halide systematics of submarine hydrothermal vents." Nature 342(6246) (1989)

Chan, L. H., and J. M. Edmond. La. State Univ., Dep. Geol. and Geophys., Baton Rouge, LA, Mass. Inst. Technol., USA. "Lithium isotope exchange during seawater-basalt interaction." American Geophysical Union; 1990 ocean sciences meeting, Eos, Transactions, American Geophysical Union 71 (1990)

Charlou, J. L., L. Dmitriev, H. Bougault, and H. D. Needham. Ifremer, Centre Brest, BP 337, 29273 Brest Cedex, France. "Hydrothermal methane between 12 degrees and 15 degrees north over the mid-atlantic ridge." Deep-sea res part a oceanogr res pap 35 (1). 121-132. (1988.)

Clark, D. L. Dept. of Geology & Geophysics, Univ. of Wisconsin, Madison, WI. "Early history of the Arctic Ocean." Paleoceanography 3(5) (1988)

Corso, W., J. A. Austin, and R. T. Buffler. "The early Cretaceous platform off northwest Florida: controls on morphologic development of carbonate margins." Mt Geol [Denver] 86/1 P1-14 (1989)

Curl, H.C., E. T. Baker, T. S. Bates, G. A. Cannon, R. A. Feely. National Oceanic and Atmospheric Administration, Pacific Marine Environmental Lab., Seattle, WA. "Contaminant Transport from Elliot and Commencement Bays. Final Report." Aug 87. 280p. (1987) NTIS Order No.: PB89143267XSP

## Influence of Mid-Ocean Ridge Processes on the Ocean

Delaney, John R., Fred N. Spiess, Sean C. Solomon, Robert Hessler, J. Karsten, John A. Baross, D. Norton, Russell McDuff, F. Sayles, and John A. Whitehead. Univ. Wash., Seattle, WA, Scripps Inst. Oceanogr., Mass. Inst. Technol., Univ. Ariz., Woods Hole Oceanogr. Inst., Univ. Wash., Sch. Oceanogr., Seattle, WA. "Scientific rationale for establishing long-term ocean bottom observatory-laboratory systems." The mid-ocean ridge; a dynamic global system (1988)

Edmond, J.M., W. S. Broecker, R. F. Stallard, Y. C. Chung, R. F. Weiss, T. L. Ku, L. H. Chan, et al "Radium and barium at GEOSECS stations in the Atlantic and Pacific." Earth and planetary science letters 32(2) p. 258 - 267 Oct. (1976)

Hanan, B. B., and J.-G. Schilling. Grad Sch of Oceanogr, Univ. of Rhode Island, Narragansett Bay Campus, RI. "Easter microplate evolution: Pb isotope evidence." Journal of Geophysical Research 94(B6) (1989)

Howell, D. G. US Geological Survey, 345 Middlefield Road, Menlo Park, CA. "How the growth and freeboard of continents may relate to geometric and kinematic parameters of mid-ocean spreading ridges." Tectonophysics 161(3-4) (1989)

Jacobsen, S. B., and M. R. Pimentel-Klose. Dept of Earth & Planetary Sci, Harvard Univ, Cambridge, MA. "Nd isotopic variations in Precambrian banded iron formations." Geophysical Research Letters 15(4) (1988)

Jacobsen, S. B., and M. R. Pimentel-Klose. Dept of Earth & Planetary Sci, Harvard Univ, Cambridge, MA. "A Nd isotopic study of the Hamersley and Michipicoten banded iron formations: the source of REE and Fe in Archean oceans ( Australia, Canada)." Earth & Planetary Science Letters 87(1-2) (1988)

Jannasch, H. W., D. C. Nelson, C. O. Wirsen. Woods Hole Oceanographic Institution, MA. "Massive Natural Occurrence of Unusually Large Bacteria (*Beggiatoa* Sp.) at a Hydrothermal Deep-Sea Vent Site. Technical rept." Nature, v342 n6251 p834-836, 14 Dec (1989)

Jannasch, H. W., C. O. Wirsen, S. J. Molyneaux, T. A. Langworthy. Woods Hole Oceanographic Institution, MA. "Extremely Thermophilic Fermentative Archaeabacteria of the Genus *Desulfurococcus* from Deep-Sea Hydrothermal Vents. Technical rept." Applied and Environmental Microbiology, v54 n5 p1203-1209 May (1988)

# Influence of Mid-Ocean Ridge Processes on the Ocean

Jannasch, H. W., C. O. Wirsen, C. L. Winget. Woods Hole Oceanographic Institution, Mass. "A Bacteriological pressure-retaining deep-sea sampler and culture vessel." Deep-sea research, vol 20, no 7, p 661 - 664, July (1973)

Jannasch, H. W. Woods Hole Oceanographic Institution, Mass. "Bacterial content of particulate matter in offshore surface waters." Limnology and oceanography, vol 18, no 2, p 340 - 342, March (1973)

Jannasch, H. W., C. O. Wirsen. Woods Hole Oceanographic Institution, Mass. "Deep-sea microorganisms: in situ response to nutrient enrichment." Science, vol 180, no 4086, p 641 - 643, May (1973)

Kelley, D. S., and J. R. Delaney. Dept. of Geol. Sci., Univ. of Washington, Seattle, WA. "Two-phase separation and fracturing in mid-ocean ridge gabbros at temperatures greater than 700°C." Earth & Planetary Science Letters 83(1-4) (1987)

Clitgord, Kim D., Hans Schouten, and Jean-Christophe Sempere. U.S. Geol. Surv., Woods Hole, MA, Woods Hole Oceanogr. Inst., Univ. Wash., Sch. Oceanogr., Seattle, WA. "Mid-ocean ridge processes; magnetic studies." The mid-ocean ridge; a dynamic global system (1988)

Kumar, M. D. National Inst. of Oceanography, Dona Paula 406 Goa, India. "Cation hydrolysis and the regulation of trace metal composition in seawater." Geochimica et Cosmochimica Acta 51(8) (1987)

Lasaga, A. C. Kline Geological Lab., Dept. of Geology & Geophysics, Yale Univ., P.O. Box 6666, New Haven, CT. "Geochemical cycles--kinetics." Applied Geochemistry 3(1) (1988)

Lupton, J. E. "He - 3 distribution in deep water over the Mid-Atlantic Ridge." Earth and planetary science letters. 32(2) p. 371-374. Oct. (1976)

Lyle, M., M. Leinen, R. M. Owen, and D. K. Rea. Coll of Oceanogr, Oregon State Univ., OR. "Late tertiary history of hydrothermal deposition at the East Pacific Rise, 19°S: correlation to volcano-tectonic events." Geophysical Research Letters 14(6) (1987)

Michael, P. J., and R. L. Chase. "The influence of primary magma composition, H<sub>2</sub>O and pressure on mid-ocean ridge basalt differentiation." Contributions to Mineralogy and Petrology, 245-263. 96. (1987)

## Influence of Mid-Ocean Ridge Processes on the Ocean

Michael, Peter J., and Jean-Guy Schilling. Univ. Tulsa, Dep. Geosci., Tulsa, OK, Univ. R.I. "Chlorine in mid-ocean ridge basalts and FeTi basalts; evidence for magma chamber contamination by a seawater-derived component?" American Geophysical Union, 1988 fall meeting. Eos, Transactions, American Geophysical Union 69 (1988)

Michael, Peter J., and Jean-Guy Schilling. "Chlorine in mid-ocean ridge magmas; evidence for assimilation of seawater-influenced components." *Geochimica et Cosmochimica Acta*, 3131-3143. 53. (1989)

"Mid-Oceanic Ridge: A Dynamic Global System. Proceedings of a Workshop. Held in Gleneden Beach, Oregon on April 6-10, 1987." *Mid-Oceanic Ridge: A Dynamic Global System. (Workshop)* (1988) NTIS Order No.: PB89-198691/GAR.

Murnane, R. J., and R. F. Stallard. Department of Geological and Geophysical Sciences, Princeton University, Princeton, New Jersey. "Germanium and silicon in rivers of the Orinoco drainage basin." *Nature* 344(6268) (1990)

Palmer, D. R., and P. A. Rona. NOAA/AOML, 4301 Rickenbacker Causeway, Miami, FL 33149. "The acoustics of "black smoker" hydrothermal plumes." *J. Acoust. Soc. Am. (Suppl.)*, Vol. 81, No. suppl. 1, (1987) Program of the 113th Meeting: Acoustical Society of America.

Purdy, G. M. Woods Hole Oceanogr. Inst., Dep. Geol. and Geophys., Woods Hole, MA, Univ. Wash., Sch. Oceanogr., Seattle, WA. "Three-dimensional seismic imaging; applications to mid-ocean ridge processes." *The mid-ocean ridge; a dynamic global system* (1988)

Reinitz, I., and K. K. Turekian. Dept. of Geology & Geophysics, Yale Univ., P.O. Box 6666, New Haven, CT. "Super(230)Th/super(238)U and super(226)Ra/super(230)Th fractionation in young basaltic glasses from the East Pacific Rise." *Earth Planet. Sci. Lett* vol. 94, No. 3-4 (1989)

Riser, S.C. Washington Univ., Seattle. School of Oceanography. "Physical Oceanographic Characteristics of the Nares Plain Region of the Western North Atlantic." Aug 85. 157p. (1985) NTIS Order No: SAND857186

Roonwal, G. S. Dept. of Geology, Univ. of Delhi, Delhi 110 007, India. "Hot vents and massive sulphide bodies on the southern parts of the East Pacific Rise (EPR) seafloor spreading centres: Geometep-4." *Journal - Geological Society of India* 33(5) (1989)

## Influence of Mid-Ocean Ridge Processes on the Ocean

Roth, S. E., and J. Dymond. Coll. Oceanography, Oregon State Univ., Corvallis, OR. "Transport and settling of organic material in a deep-sea hydrothermal plume evidence from particle flux measurements." Deep-sea res part a oceanogr res pap 36 (8). 1237-1254. (1989)

Scott, David R., and David J. Stevenson. Calif. Inst. Technol., Seismol. Lab., Pasadena, CA. "A self-consistent model of melting, magma migration and buoyancy-driven circulation beneath mid-ocean ridges." American Geophysical Union, 1987 fall meeting. Eos, Transactions, American Geophysical Union 68 (1987)

Shimmield, G. B., N. B. Price, J. C. Guary, P. Guegueniat, and R. J. Pentreath. Grant Inst of Geology, Univ of Edinburgh, Edinburgh, Scotland, UK. "Marine scavenging of Th and Pa - evidence from mid-ocean ridge, continental margin and open ocean sediments." Radionuclides: a tool for oceanography (1988)

Swift, J. H., and K. P. Koltermann. Ocean Res. Div., Scripps Inst. Oceanogr., La Jolla, CA. "The origin of Norwegian Sea Deep Water." J. Geophys. Res. (C oceans vol. 93, No. C4 (1988)

Tennant, D.A., S. L. Walker, J. W. Lavelle, E. T. Baker. National Oceanic and Atmospheric Administration, Pacific Marine Environmental Lab., Seattle, WA. "Practical Manual for Determining Settling Rates of Ocean Disposed Sewage Sludge. Technical memo." Feb 87. 35p. (1987) NTIS Order No.: PB87178273XSP

Tuttle, J. H., H. W. Jannasch. Woods Hole Oceanographic Institution, Mass. "Occurrence and types of thiobacillus-like bacteria in the sea." Limnology and oceanography, vol 17, no 4, p 532 - 543, July (1972)

Williams, D. F., R. Ehrlich, H. J. Spero, and N. Healy-Williams. "Shape and isotopic differences between conspecific foraminiferal morph ho-types and resolution of paleoceanographic events." Palaeogeogr Palaeoclimatol Palaeoecol [Amsterdam] 64/3-4 153-162. (1988)

Wirsén, C. O., H. W. Jannasch, S. G. Wakeham, E. A. Canuel. Woods Hole Oceanographic Institution, MA. "Membrane Lipids of a Psychrophilic and Barophilic Deep-Sea Bacterium. Technical rept." Current Microbiology, v14 p319-322 (1987)